



ABSTRACTS IN URGENT CARE

- Differentiate Bacterial from Viral to Decrease Unneeded Antibiotic Prescriptions
- Tools for Treating Chronic Sinusitis
- Antibiotic Resistance in Gonorrhea
- Supportive Care Is Best for Bronchiolitis
- Intravenously Administered Dexamethasone Can Ameliorate Low Back Pain
- Pregnant Patients Are Too Often Prescribed Category D and Category X Drugs
- Diphenhydramine Is Unhelpful in Migraines
- Modified Valsalva Maneuver Is Beneficial in Supraventricular Tachycardia

■ SEAN M. MCNEELEY, MD

Each month the Urgent Care College of Physicians (UCCOP) provides a handful of abstracts from or related to urgent care practices or practitioners. Sean McNeeley, MD, leads this effort.

Differentiate Bacterial from Viral to Decrease Unneeded Antibiotic Prescriptions

Key point: *The overprescribing of antibiotics is still an issue.*

Citation: Jones BE, Sauer B, Jones MM, et al. Variation in outpatient antibiotic prescribing for acute respiratory infections in the veteran population: a cross-sectional study. *Ann Intern Med.* 2015;163:73–80.

Concerns over the amount of antibiotic prescriptions continues. (See also “Delayed Prescribing of Antibiotics for Respiratory Tract Infections” in our September 2015 issue: <http://www.jucm.com/delayed-prescribing-of-antibiotics-for-respiratory-tract-infections/>.) In this 8-year-long study of patients served by the U.S. Department of Veterans Affairs, the authors attempted to determine the rates of antibiotic prescription for upper respiratory infections and the circumstances that led to the prescriptions. Patients seen at Veterans Affairs facilities, emergency departments, urgent care centers, and primary care offices with

diagnoses of upper respiratory illnesses, such as pharyngitis, sinusitis, tonsillitis, and bronchitis, were identified. In addition, information about antibiotic use within 5 days of a health-care visit, characteristics of the patients’ health-care providers, and patients’ medical conditions were obtained. Noteworthy findings were as follows:

- Antibiotics were prescribed for 68.4% of patients.
- The most common diagnoses for antibiotics included sinusitis (86%) and bronchitis (85%).
- Other common conditions under which antibiotics were frequently prescribed were high fever (78%) and a visit to an urgent care center (75%).
- The top 10% of antibiotic prescribers ordered these drugs in $\geq 95\%$ patient visits, whereas the bottom 10% of prescribers ordered the drugs in $\leq 40\%$ of patient visits.
- Macrolides were also prescribed more over time despite recent warnings in the literature.

Although this study did not reveal significant reasons for data differences in prescribing patterns, its findings are concerning, particularly the percentage of prescriptions for bronchitis, assuming that in many of these cases, the disease is acute and thus viral. However, the applicability of the study’s findings are limited because it was descriptive rather than evaluating each prescription to determine whether it met a guideline; the researchers just counted the percentage of pre-



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scriptions. From an urgent care perspective, it is still important to differentiate bacterial from viral to decrease the number of unnecessary antibiotic prescriptions. ■

Tools for Treating Chronic Sinusitis

Key point: *Several tools are available to treat chronic sinusitis.*
Citation: Rudmik L, Soler ZM. Medical therapies for adult chronic sinusitis: a systematic review. *JAMA*. 2015;314:926–939.

Although urgent care providers frequently see patients with acute sinusitis, patients with chronic sinusitis sometimes present, and they might begin to do so more frequently as the primary-care shortage worsens. This article reviews the evidence for treatment of chronic sinusitis in adults, which is defined as sinusitis symptoms that last for more than 3 months. The authors reviewed 29 individual studies, 12 meta-analyses, 13 systematic reviews, and 4 randomized studies. Supported treatments include high-volume saline irrigation, with topical steroid therapy as a first-line treatment. If nasal polyps exist, physicians should consider a short course of systemic steroids, 3 weeks of doxycycline, or a leukotriene antagonist. A prolonged course of macrolides (3 months) might be considered for patients without polyps. Antihistamines and immunotherapy seem to be less helpful. From an urgent care perspective, nasal saline rinses and nasal steroids make sense. Oral steroids and short courses of antibiotics may also be appropriate for some patients. ■

Antibiotic Resistance in Gonorrhea

Key point: *Gonorrhea is becoming more resistant to antibiotics.*
Citation: Unemo M. Current and future antimicrobial treatment of gonorrhoea—the rapidly evolving *Neisseria gonorrhoeae* continues to challenge. *BMC Infectious Diseases*. 2015;15:364

Gonorrhea has been an issue, and unfortunately, antibiotic resistance has grown for this particular bacteria. This article describes the state of resistance and treatment around the world. Currently, doses of 250 to 1000 mg of ceftriaxone are necessary. Additional treatment with 1 to 2 g of azithromycin is the newest addition to treatment. There is some concern that even at the highest doses, this combination may already face some bacteria resistance in Eastern nations. Some researchers have been testing a combination of 240 mg of gentamycin plus azithromycin, which has been very effective. For the urgent care provider, using the dose of 250 mg of ceftriaxone with 2 g of azithromycin that is recommended by the U.S. Centers for Disease Control and Prevention makes the most sense, keeping an eye on potential bacteria resistance and warning patients that the disease is potentially untreatable. ■

Supportive Care Is Best for Bronchiolitis

Key point: *There is still some work to do to understand supportive care as the mainstay of bronchiolitis treatment by all health-care providers.*

Citation: Ho S-W, Huang K-Y, Teng Y-H, Ku M-S, Chiou J-Y. Practice variations between emergency physicians and pediatricians in treating acute bronchiolitis in the emergency department: a nationwide study. *J Emerg Med*. 2015;48:536–541.

Bronchiolitis continues to be a frequent cause of visits to emergency departments and of hospitalizations in the very young. Few interventions or tests have been found to alter the disease's course. This cross-sectional study, performed in a Taiwan emergency department, analyzed the treatment patterns of emergency specialists versus pediatricians for this ailment, using registration and claims data from 2008 to 2011. Patients were divided into two groups, according to whether they saw a pediatrician or an emergency medicine specialist. Pediatricians were defined as providers who treated children only in the ED. Actual pediatric emergency physicians were excluded from this study because most of the care was provided by general ED and pediatrics-trained physicians. Both pediatricians and ED physicians ordered tests at a significant rate; however, the pediatricians ordered fewer tests. Examples of test or treatments not considered necessary included chest x-rays (pediatricians, 46%; emergency medicine specialists, 64%), complete blood cell count (22% vs. 33%), and C-reactive protein (23% vs. 35%). There was a greater difference between groups for intravenous fluids (3.5% vs. 21%) and for hospitalizations (19.5% vs. 36%). For the urgent care provider, this study's findings are a good reminder that bronchiolitis is a viral illness that responds mostly to suction and other supportive care. One key flaw of the study was looking at patients by final diagnosis without considering the path taken to get there. For example, a trial of albuterol in a patient with a strong family history of asthma can differentiate between new-onset asthma and bronchiolitis. ■

Intravenously Administered Dexamethasone Can Ameliorate Low Back Pain

Key point: *Steroids seem to decrease acute low back pain.*

Citation: Balakrishnamoorthy R, Horgan I, Perez S, Steele MC, Keijzers GB. Does a single dose of intravenous dexamethasone reduce Symptoms in Emergency department patients with low Back pain and RAdiculopathy (SEBRA)? A double-blind randomised controlled trial. *Emerg Med J*. 2015 Jul; 32:525.

For those of us with primary-care backgrounds, steroids have been part of our toolbox for some time for treating acute low back pain. This small double-blinded, randomized study of 58 patients attempted to analyze the pain-relief efficacy of intravenous dexamethasone in emergency departments in both rural and ur-

ban settings by giving them either 8 mg of the drug or a placebo. Patients' outcomes were compared at 24 hours using a visual analog scale. Patients in the steroid group had a 1.86-point greater reduction in pain scores than did those in the placebo group. Treated patients had a reduced length of stay in the emergency department, and their ability to perform a straight-leg raise improved. For urgent care providers, this is one more method for providing steroids—if intravenous therapy is available in the particular center. A study comparing dexamethasone injection to a steroid dose pack would also be helpful. ■

Pregnant Patients Are Too Often Prescribed Category D and Category X Drugs

Key point: *Think twice before prescribing medications to pregnant patients.*

Citation: Palmsten K, Hernández-Díaz S, Chambers CD, et al. The most commonly dispensed prescription medications among pregnant women enrolled in the U.S. Medicaid program. *Obstet Gynecol.* 2015;126:465–473.

A significant number of pregnant patients receive prescriptions. This study assessed the most common prescriptions and those that are considered category D or X. Using Medicaid data, the authors determined the 20 most commonly prescribed drugs as well as the 10 most concerning prescriptions written for pregnant patients. They report that there is little good-quality evidence about how medications affect pregnancy, and thus they hope that this study may guide future research. Of note, 85% of patients were given at least one prescription. Medications to treat infection topped the list: nitrofurantoin, 21% of prescriptions; metronidazole, 19%; amoxicillin, 18%; and azithromycin, 16.9%. All of those are commonly prescribed in urgent care centers. Cholesterol, hormones, and anxiolytic medications were most of the category X prescriptions. Although this study's findings may not change current prescribing patterns, the sheer number of pregnant patients treated with potentially dangerous medications is concerning. As urgent care providers, we must think twice before prescribing any medication and should discuss with pregnant patients both the known and unknown risks of specific medications. ■

Diphenhydramine Is Unhelpful in Migraines

Key point: *There is no evidence for using diphenhydramine to treat migraine.*

Citation: Friedman BW, Cabral L, Adewunmi V, et al. Diphenhydramine as adjuvant therapy for acute migraine: an emergency department–based randomized clinical trial. *Ann Emerg Med.* 2015 August 27. doi: 0.1016/j.annemergmed.2015.07.495. [Epub ahead of print.]

Migraine headaches continue to be a frequent cause of visits

“The sheer number of pregnant patients treated with potentially dangerous medications is concerning.”

to urgent care centers and emergency departments. Some believe that migraines have an allergic component and thus use diphenhydramine as an adjunct treatment. In this double-blind placebo-controlled study, 208 adults up to age 65 years were randomized to receive either a combination of diphenhydramine and metoclopramide or a combination of placebo and metoclopramide, to determine whether a combination therapy of 50 mg of diphenhydramine plus 10 mg of metoclopramide, administered intravenously, results in greater relief than metoclopramide alone. The presence or absence of allergic symptoms was also noted. Unfortunately the group receiving diphenhydramine did not experience significant relief of symptoms compared with the control group by 1 hour or by 48 hours. Adverse events were similar between groups. For the urgent care provider, findings from this small study are unlikely to change current practice, but they should not encourage the addition of diphenhydramine to current therapies unless other allergy issues are present. ■

Modified Valsalva Maneuver Is Beneficial in Supraventricular Tachycardia

Key point: *Modification of the Valsalva maneuver is beneficial in supraventricular tachycardia.*

Citation: Appelboam A, Reuben A, Mann C, et al; REVERT trial collaborators. Postural modification to the standard Valsalva manoeuvre for emergency treatment of supraventricular tachycardias (REVERT): A randomised controlled trial. *Lancet.* 2015 August 24. doi: 10.1016/S0140-6736(15)61485-4. [Epub ahead of print.]

Supraventricular tachycardia is a common malady that sometimes responds to vagal maneuvers. This study investigated a modified vagal maneuver in 418 patients diagnosed with supraventricular tachycardia in an emergency department to determine whether it could produce better results. Both maneuvers started with the patient in a semi-reclined position. Patients in both groups were asked to apply the same amount of pressure. The intervention group was placed in a supine position and passive leg-raises were performed. The participants were randomized by use of envelopes, but obviously, researchers could not be blinded to the identity of each patient's group. With a second attempt, the modified Valsalva group outperformed the standard Valsalva group by 43% to 17%. No disadvantages were noted for the new method. Although this was a small study, the likely lack of adverse effects and the significantly improved outcomes should provide a good reason to consider the new maneuver. ■